The Dark Zebra

and

ZebraHZ

for version Zebra 2.7, Howard Scarr 2012

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Introduction

The Dark Zebra

A bank of over 400 presets, a collaboration between Hans Zimmer and Howard Scarr. Practically all Zebra sounds in the *The Dark Knight* as well as *The Dark Knight Rises* soundtracks are included, plus several more that didn't quite fit it into the scores. Some of the more recent presets make use of the extra features available in ZebraHZ.

You will find a list of all The Dark Zebra presets at the end of this document.

ZebraHZ

ZebraHZ started life as Hans Zimmer's customized version of Zebra2.5, with several of the requested features on board: classic analogue filter models like in *Diva*, a resonator effect module like in the old *Polymoog*, polyphonic compressors (per lane in the grid – especially good for drum sounds!) and two more mod-mappers. At present, ZebraHZ is a free update from Zebra2 specifically for owners of *The Dark Zebra* patch set.

Installation

Installation is easy: double-click the appropriate installer (i.e. for Mac or PC) and follow the instructions. To update to a more recent version, simply install over the existing one. If you have added your own presets, back up them up first – better safe than sorry!

Important: ZebraHZ uses the same registration code as Zebra2. Load an instance of ZebraHZ, right-click on the data display then select *enter registration code*. If you can't find your Zebra2 reg code, go to u-he support and either select *I just need to know my serial numbers* or log in then select *Zebra 2.x [Send me my serial number]*.

File Locations

Win	Presets	*...\VstPlugins\u-he\ZebraHZ.data\Presets\ZebraHZ*
	Preferences	*...\VstPlugins\u-he\ZebraHZ.data\Support* (*.txt files)
	MSEG/OSC	*...\VstPlugins\u-he\ZebraHZ.data\Modules*
Mac	Presets	*MacHD/Library/Audio/Presets/u-he/ZebraHZ/*
	Presets (user)	*[you]/Library/Audio/Presets/u-he/ZebraHZ/*
	Preferences	*[you]/Library/Application Support/u-he/com.u-he.ZebraHZ...*
	Resources	*MacHD/Library/Application Support/u-he/ZebraHZ*
	MSEG/OSC	*MacHD/Library/Application Support/u-he/ZebraHZ/Modules/*

(you might have to copy MSEG+OSC folders from *.../Zebra2.data/Modules* !)

Note: The precise locations depend on your installation paths.

Read Me!

- At present, ZebraHZ is **AU**, **VST2** and **VST3** only i.e. there is no RTAS Mac version. RTAS Mac users can still load most of the presets into the regular Zebra2, however. You won't see the blue/gray skin and won't have access to the custom modules – so several presets will sound "wrong" in RTAS. We intend to support AAX and will (if all goes well) release a free update in this format very soon. As soon as ZebraHZ updates are ready, they will be available in the user area at u-he support, so we recommend setting up an account there!

- You will need a registered Zebra2 to run ZebraHZ. The product you bought is the soundset *The Dark Zebra* – ZebraHZ is simply an update for Zebra2 so you can use all the Dark Zebra patches. Of course this means that resale of Dark Zebra is only allowed if you also include your Zebra2 license in the sale.

- ZebraHZ and Zebra2 require a registration code issued after mid-2009. If yours is older, go to u-he support and request a new one – if your email address has changed in the meantime, please let us know. If you can't remember when you purchased Zebra2, please retrieve your original reg code before upgrading.

  Note: You can't break anything. If you start Zebra2 with an obsolete code, it will ask you to contact support@u-he.com so we can send you a new one. As always, right-click on the data display to enter your registration code.

License Agreement and Terms of Use

This license agreement is between you (the licensee) and **Heckmann Audio GmbH**, the copyright holder and sole distributor of **The Dark Zebra** patch set. This agreement is based on the common understanding that copyrighted material must not be distributed without the written consent of the copyright holder, and therefore that anyone intending to lend, copy or otherwise distribute this material will have read this agreement before downloading, purchasing or otherwise obtaining the product accompanying the license.

Stipulations:

1. Before using this patch set, you must have purchased a legitimate license for **Zebra2** as well as for **The Dark Zebra**.

2. You may not distribute resampled or otherwise replicated patches from **The Dark Zebra** in any product, commercial, free or otherwise. This includes, but is not limited to, sample libraries and sample-based synthesizers. You may, however, create such derivates for your own musical works as long as these derivates are only distributed in the context of the musical work.

3. **The Dark Zebra** license may only be sold together with the **Zebra2** license.

DIVA VCF

ZebraHZ is a bit of a Frankenstein's monster. Under the circumstances, the Diva-style filters were integrated into the GUI in the best way possible: Not in the generator rack like the other filters, but as tabbed panels in the lower area (like the MSEGs).

ZebraHZ offers a total of 8 Diva-style filters: 4 highpass and 4 lowpass / multimode. To access the controls, click on the **DIVA VCF** button to the right of the lower bar:

general settings

At the far left of the DIVA VCF panel are the following general filter options:

- **Accuracy** is a very important global parameter, as it trades CPU-hit for realtime audio quality (especially resonance). If your computer stutters while playing presets that use D-filters, switch the accuracy mode to *fast* or even *draft*. You will soon learn which one your system can handle. Monophonic presets should be no problem, even on older computers.
- **OfflineAcc** is the accuracy used for offline audio rendering. You should generally render tracks to audio in the highest quality – to do this, set *OfflineAcc* to *best.* If you find that your sound works best in Draft mode (e.g. because it is meant to be gritty), feel free to switch this to *Same*.
- **RandomCutoff** is a button that generates new random values for *CutoffSlop...*
- **CutoffSlop** scales the amount of "random" applied to all D-filter cutoff frequencies.

HPF settings

Next are the panels for the Diva **highpass filters** which are tabbed like the MSEGs: To switch panels, click on e.g. *D-HPF2*. There are two basic highpass models:

- **HPF PRE** is the simplest analogue model. The Res and Revision settings are ignored.
- **HPF BITE** is a "character" highpass with cutoff modulation and resonance controls. This is the more CPU-hungry option, so you can expect some powerful tonal shaping. Two *Revisions* are available, with different characteristics.

For more detailed information about these filters, please refer to the Diva manual.

LPF settings

The righthand side of the panel is for the main D-filters. They are shown in pairs that are switched via the long buttons at the bottom, *Diva LP1+2 / Diva LP3+4*. Each filter has only three fixed-function knobs: Cutoff, Res (resonance) and Key (key follow).

The central knobs labeled "..." are modulation depths for a definable source i.e. you can click on them and select any modulation source you like. The upper two both control cutoff, the lower one controls resonance.

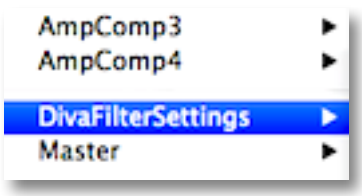
There are 4 basic Models – *Ladder, Cascade, Multimode and BITE:*

- **Ladder**: Classic 24dB / 12dB per octave, with key-follow and resonance controls. Click on the button labelled *Ladder+Casc* to switch between 24dB (4-pole) and 12dB (2-pole).
- **Cascade**: A cleaner sounding filter than *Ladder*, but with a dedicated switch (the one labelled *Cascade*) used for selecting a sub-type of this filter model. Cascade can also be switched into 12dB / octave mode using the *Ladder+Casc* button.
- **Multimode**: The *Multimode* is based on the filter in yet another classic polyphonic synthesizer (or two)! Use the button labeled *Multimode* to select one of the following:

  LP4 – a 4-pole low pass
  LP2 – a 2-pole alternative
  HP – a full-spec high-pass
  BP – band-pass (removes both high AND low frequencies).

- **BITE**: This one sounds **very** different. The tone is highly dependent on input signal levels, the selected revision (BITE Rev) and the value of Res (resonance). Like the corresponding highpass, the lowpass BITE filter is a real character, able to deliver anything from solid 2-pole to screaming mayhem.

important!



While editing the matrix, please do not select anything you see in the *DivaFilterSettings* submenu. This is a remnant of porting the filters from Diva, and is likely to cause trouble if you mess around with it.

Compressors

Each lane in the main grid has its own polyphonic (i.e. per voice) compressor. Like the Diva-VCF, all controls appear in the lower area.

Click on ***VCA Comps*** to open the following panel (only two of the four are shown here):

On/Off
The lane compressors can be switched off individually to conserve CPU.

Mode
eco: original lo-fi version, with low CPU-hit.
smooth: smooth compression, the best choice for most sounds.
strong: very powerful compression, best for bold percussive sounds.

Attack
The time it takes the compressor to fully work after the threshold has been reached. Attack can affect brightness – very fast values cause the compressor to reduce gain immediately, which can dull the attack of the original sound. When set to zero, Attack is only one sample in length.

Release
Recovery time i.e. the time the compressor takes to return to unity gain after the input signal has fallen below the threshold. Very short release can distort low-frequency input, overly long release can ‘clamp’ the sound down and not release enough before the next ‘attack’ arrives. When set to zero, the release is only one sample long.

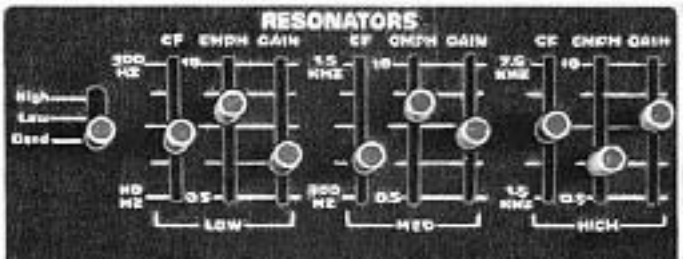
Threshold
Sets the level above which compression will be applied, and below which compression will be released. Lower values will result in more compression than higher values.

Comp
Sets the amount of compression – think of this as a dry/wet crossfade.

Input
Adjusts the input level before the signal reaches the compressor.

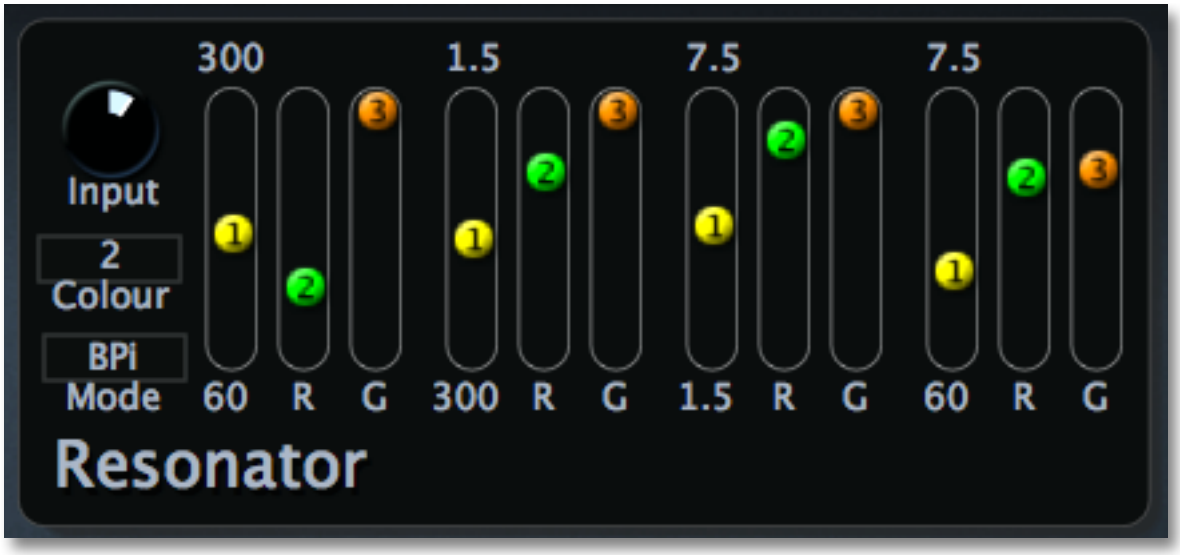
Output
Adjusts the output level to compensate for any loss/gain resulting from compression.

Resonator



One of the very first polyphonic synthesizers ever included a 3-band peaking filter that could be used to dramatically shape the overall sound. Here is a video example of the original, and here is information about an interesting hardware "clone".

The ZebraHZ version is similar, but is completely modulatable and has an extra full-range band. To see the Resonator, click in the effects grid and select the *Res1* module from the very bottom of the list...



- **Input** adjusts the signal level at the resonator's input. Note that ZebraHZ's resonator is strictly monophonic – stereo signals are summed to mono first.
- **Colour** selects one of 3 different analogue filter models in the order of CPU usage.
- **Mode** switches the type of filters used: LP = lowpass, BP = bandpass, BPi = bandpass with the second filter (300Hz to 1.5kHz) inverted, HP = highpass
- **60 to 300** etc.: the yellow sliders determine cutoff frequencies between those ranges. Note that the last filter is full-range i.e. 60Hz to 7.5 kHz.
- **R**: the green sliders adjust the resonance for each filter.
- **G**: sets the output gain of each filter.

Tip: ZebraHZ's resonator is worth mastering. It can even help train your ears to recognize natural formants in the environment or in acoustic musical instruments.

Backstory

The Dark Zebra is the result of a 4-year collaboration between Hollywood film composer Hans Zimmer and synth sound designer Howard Scarr. It all began in 2007 with a surprise e-mail from Hans to **Urs Heckmann**, developer of the Zebra2 modular synthesizer. The initial correspondence went something like this:

```
Dear Urs

You must have worked so hard to design such a brilliant synth! I have a little
favour to ask of you, perhaps you could help. I need a sound programmer for
the next Batman movie. We're all much too busy here to get some murky sounds
out of Zebra, so if you happen to know somebody with a vivid imagination,
someone who doesn't need much sleep... (etc.)

so - many thanks!

Hans Zimmer
```

```
Dear Hans

Great to hear from you personally! For Zebra sounds I have the ultimate
address: the guy who created our new factory sounds... (etc.)

greetings from Berlin!

Urs ;)
```

A few months later, Zebra2 sounds for THE DARK KNIGHT were beginning to take shape, but it was tough going. Howard's early attempts were either too jolly or too clever by half, too technical, so the upper echelons at Remote Control Productions decided that it would be best to lock him in the company dungeon with nothing but a daily portion of gruel, a state-of-the-art computer and a supply of candles for company. And a bucket called Bob.

Cut to a very different room. Spacious, sumptuous, like a cross between the bridge of the Nautilus and a Viennese brothel. A clean-shaven Maestro was once again gazing into the monitors, tweaking sounds emanating from his go-to synthesizer into submission. It was slowly starting to gel – he had almost forgotten about that old bloke downstairs...

The days turned to weeks, the weeks turned to more weeks – then it happened. Through an unused cable duct leading directly into a corner of a small programming room came an unpleasantly throbbing drone accompanied by a clanking that eventually morphed into the painful grating of metal upon tortured metal. Partly because the cacophony was disturbing his work, but mostly because it scared him out of his pants, the eager young assistant called the security guards. Howard was located and extracted from the cellar that same afternoon – covered in grime, but grinning from ear to ear.

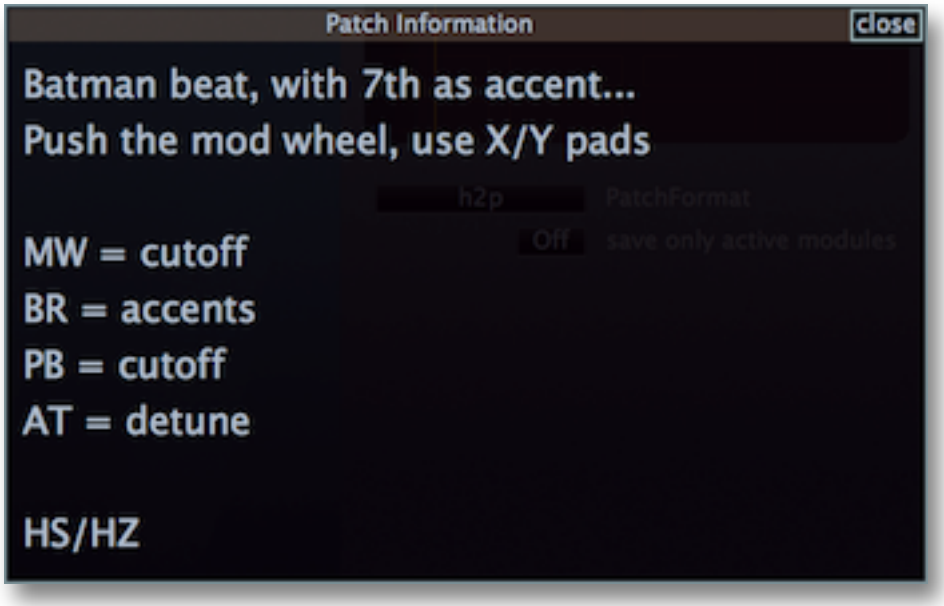
"I did it", he croaked. "I made a usable sound", he claimed. "Say hi to Bob", he urged. The bucket was whisked away at arm's length, Howard donned a pair of Ray Bans, grabbed a quick café latte and shuffled outside for his first cigarette in a month. Life tasted so good.

Thus began a fruitful collaboration that reached its peak in the sound set you now hold in your grubby little hard drive.... Enjoy!

The Dark Zebra Presets

Most of these presets were programmed to be performed **manually**, they make use of appropriate MIDI control data: modulation wheel (MIDI CC#01), pressure, pitchbend and breath controller (MIDI CC#02).

To play these presets with the intended expression, you should read the patch information box for each one. For instance, here's the one about **Batpunk Seq+**:



To open the Patch Information window, click on the *i* symbol in the upper bar.

Please note the following abbreviations:

AT	-	**Aftertouch**
BR	-	**Breath Control (MIDI CC #02)**
MW	-	**Modulation Wheel (MIDI CC #01)**
PB	-	**Pitch Bender**

Lastly, all preset names that end in a '+' (plus) sign make use of the X/Y pads.

Basses + Drones

Aerodrone
Analog Schmanalog
Arise Drone 1+
Arise Drone 2+
Bane Bass - rough
Bane Bass - smooth
Bane Drone
Base Metal
Basic Analog Drone
Bass Ivorish
Bass-DIVA+
Bass-TARD
Bombers Over Berlin
Boom Bass
Deehive
Deep Limbo Drone
Deep Pain Drone
Faith Healer
Feedback Drone Guitar
Feedback Soft Metal
Foundry Bass
Intro Dive
Landslide
Monstrosity
Octave Bass
Pulses Drone
RezDrone - filter
Ringmod Pulser
Scramble Bass
Square Slipper
Stereo Bass
Throat Bass+
Walteration

Bells + Metallurgy

Bell Labs 2+
Bell Pad+
BenderZING+
Breathing Bells with Fizz+
Chord Metal - thin
Chord Metal - thinnest
Foundry Bass
Gobichord - hard
Gobichord - soft
Hong Drum
Limbo hard
Ma Bell+
Metal Spank - bright
Metal Spank - dark
Metal Spank - slow
Partial to Bells
Punching Metal
RezDrone - cold 1
RezDrone - cold 2
Scaffolding
Scissors
Swordmaster
Tonk to Metal
Tortured Metal - hits
Tortured Metal - scream
Zingtar

Drums + Clocks

Alarm Clock
AutomatiQ+
B-Begins Comb
Bane Beat 5-4+
Bane Shatter
Bataalimba+
Batcave HiHat - fast
Batcave HiHat - slow
Batflaps Performer
Batpunk Havana Club
Big Flamboo
Big Flapper
Breathing Bright
Breathing Cat
Breathing Dark - fast
Breathing Dark - slow
Breathing Slow
Chicken Shake
Clock Backward Time - fast
Clock Backward Time - slow
Clock Bones+
Clock Bongito
Clock Click - binary
Clock Click - tristate
Clock Hollow
Clock Scissors
Clock Spacebirds
Crash Cans
Drum Analog Noise
Echo Perk
Field Player+
Flapbeat fast 5-4 noise
Flapbeat fast 5-4 pan
Flapbeat slow 5-4 noise
Flapbeat slow 5-4 pan
Gobi Tech percussion
Gotham Storm

Gotham Ticker
Gretschen 8th+
Gretschen 16th+
Gretschen single+
Hatbox 5-4
Hatnoise Wave
Log to Stick
Noise Pulse 8th
Noise Pulse 16th a
Noise Pulse 16th b
Noise Pulse 16th c
Noise Pulse 16th d
Pageturn - clean
Pageturn - loop
Pageturn - tremor
Phase Train
Punch Pots - comb
Punch Pots - noise
Rattled
Snapper 3
Square of the Hippo
Timber Tomsnare
Tom Bombers
Trilobite
Tungsten Toms+
Warpatch
Water Pot

Effects + Chaos

Aleatronic
Arise Noise
Arise Tones
Bane Shout - Basara
Bane Shout - Deshi
Bowed Chaos
Cloven Hoof
Construction at RCP
Dark Chaos
Demon Whispers
E-Donkey+
Eerie High Mono
Electron Chain
Electron Tank
Emo Trashing L100
Falling Noise
Faze Thunder
Ghosts
Hadron Hall 2
HeliBomber
Limbo - chaos
Limbo - slow
Long Swoop
Low Strangle
Noise Angels
Road Accident Kit
Rumbling
Splinters
Suffolkation Tardis
The Long Now - orbit
The Long Now - straight
Tomb End
Watershed
Wheel Noise - rumble
Wheel Noise - simple
Whispercussion+
Winged Dwarf
Winged Giant

HighArps + Chords

5-4 Buzzchord
7-8 Batcave inspired
8th Horn Pulse
Angel Falling - Dm
Angel Falling - free
Angel Rising - Dm
Angel Rising - free
Batagonia
Batbeat Holes+
Batcave crystals
Batcave glass harmonica
Batcave MSEG swim1
Batcave MSEG swim2
Batcave octaves - analog
Batcave octaves - mellow
Batcave overtone shift
Batcave psirens
Batcave syncing down
Batcave-ish pluck
Batcave-ish scrape
Berlin Speed
Bop Talk+
Bow Bounce Synth 1
Bow Bounce Synth 2
Breathing Choir
Cat Appeal
Cat Chanel
Cat Cutter
Cat Pulse
Cat Techno 1 - hypersaw
Cat Techno 2 - busy
Cat Techno 3 - resins
Chord Metal - bellish

Chord Metal - flappy
Chord Metal - harmless
Chord Metal - mild 1
Chord Metal - mild 2
Chord Metal - straight
Chord Mombassa
Chord Vitamin B
Chord Vocal
Chordination
Combplayer fast
Combplayer hard
Combplayer slow
Combplayer soft
Dream Roll
Fast Rusty Bomber
Five Against Four - minor
Five Against Four - neutral
Flamencomb Dark
Flamencomb Real
Gated Atlantic
Glass Peals and Flaps
Gobi Banjo - fast
Gobi Banjo - slow
Gobi Tech monohard
Gobi Tech polysoft
Gobinator
Hardface
Hektik 32 bright
Hektik 32 high
HiSeq Flute 4-4
HiSeq Flute 5-4
HiSeq Hang
HiSeq Viral 1
HiSeq Viral 2
HiSeq Viral 3
Little Roller
Mock 15 Arp
Straight Talk
Strumflap

Leads + Horns

Aetherial Tron
Angelis
Asynth2
Bane Brass
Bat Horns
Benderphone
Berlin One
Big Wing Blade
Blade - high hard
Blade - high soft
Blade - original raw
Blade - reverb
Blade - synced wobble
Chord Bender Choir
Chord Bender Saws
Crazy Diamond poly
CSBO 4th
CSBO duelling XMFs
CSBO effects
CSBO glide
CSBO innocent
CSBO simple
CSBO swell+
Distant Sun
Faze Four Fan Fare
Flappy MG Mono
Flappy MG Poly
Forlorn - full
Forlorn - pure
Forlorn - stringy
Hans Forlorn
Hornstar
Instability
Jazz Tonto+
Lonely Batcall complex+
Mock 15
Ostinato 1_4
Ostinato Sad
Phazor
Pitched Noise poly
Power Chorder
Power Leader
Singing Triangles
The Giorgio Room
Triangle Ghost
Vintager
Virus Horns

LowArps + Stomps

3rd Plodder
8th Primitive Stomp HS
16th Primitive Stomp 1
16th Primitive Stomp 2
16th Stomp - chug timps
16th Stomp - five hills
Army Base 1
Army Base 2
B-Begins aggressive
B-Begins simple 1
B-Begins simple 2
B-Begins simple 3

B-Begins VIRUS clean
B-Begins VIRUS distort+
B-Begins VIRUS noise
B-Begins VIRUS punch
Bass Propeller
Bass-DIVA stomp
Batpunk Seq+
Batpunk Seq1 - speaker
Batpunk Seq2 - ricky+
Batpunk Seq3 - orient+
Breathing Bass
Cat Bass Seq+
Cheops1
Cheops2
Chug1 - fast+
Chug2 - cutter
Chug3 - large
Deshi-Basara Beat
Dr Pump
Flaps osc
Flaps ugly
Ghana Beat+
Heartbeat Drone
Hektik 32 low
MiniPump - 8th
MiniPump - 16th
Octave Jump 1
Octave Jump 2
Octave Jump 3+
Octave Jump 4
Plod Bass
Precinct 14
Precinct 15
Rien de Pulse
Rolling Metal
Sync Chord Stomp
Three Quarters Breathing
Vitamin B
Cat Pluck
Choir-ish Pad
Classic Stringer
Comb Strings
Comba Karma
Elevenotron In
Elevenotron Out
Fluttery Strings
Forgotten Angels 2
Forlorn - waver
Harp
Liquid Rust
Lonely with Windchimes
Minor Raise
Nepalese Temple+Flutes
Nepalese Temple+Railway
Newmantics
Nightshore
Organigram
Pad 59
Percalliope
RezDrone - vocal
Rusty Harp
Sad Pad
Sad Strings
Saengerbuben
Strings and Horn Split
Supersquare Poly
Violin Fluff
Waterpiano
Ztrings 1
Ztrings 2
Ztrings 3
Ztrings 4
Ztrings 5

Pads + Keys

Aetherium+
Alternator Flute
An Enoding
Analog Piano
Atlantic Swell
Bathwater Harp+
Beano
Bling+
Blue Glass
Bouncer
Box of Tron

Xtras

Atomic Ruster
Bendybass
Canned Flutes
Comedy Lab
Flagship Brass+Strings
Howard Square
Kraft
Marcato Chunks
Maximini
Minibass 1
Motor 49
Oscar Harpsi
Rasp Room
Resonator Learner
Scrapie
Sharpsichord
Shepard Template
Snapper 1
Snapper 2
To Boldly Go
Underwater Pianette
Voyage 59
Wet Potz